



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,387	09/05/2003	Scott Howland Baker	HEDUS 002	8539
39170	7590	06/06/2005	EXAMINER	
HITACHI AMERICA, LTD. 50 PROSPECT AVENUE LEGAL DEPT. TARRYTOWN, NY 10591			ROY, SIKHA	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b> 10/656,387	<b>Applicant(s)</b> BAKER, SCOTT HOWLAND	
	<b>Examiner</b> Sikha Roy	<b>Art Unit</b> 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1003.0304</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities:

Page 3 line 13, 'lower contract' should be replaced by --lower contrast-- .

Appropriate correction is required.

### ***Claim Objections***

Claims 7 and 17 objected to because of the following informalities:

In claim 7 and 17, the limitation reciting 'said contrast ribs and adjacent troughs cover a surface area greater than 75% of the frame's inner wall's **said** surface area of said frame's cooling chamber' is not very clear. For continuing examination purpose 'said contrast ribs and adjacent troughs cover a surface area greater than 75% of the frame's inner wall's surface area of said frame's cooling chamber' is considered.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3,5-8,10-14,16,17,18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,250,968 to Numata et al.

Art Unit: 2879

Regarding claim 1 Numata discloses (Figs. 1,2 column 3 lines 11-47, column 4 lines 1,2, 56-61 column 5 lines 19-23) an apparatus 11 (holder) for coupling a projection lens assembly 26 and a projection optical signal generating device (cathode ray tube or CRT) 16 comprising a frame portion (23,25) for supporting the projection lens 26 in alignment with the CRT 16, the frame portion having a first circular opening 12a (towards the CRT 16) and a second opening 23a (towards the projection lens assembly 26) at opposite ends and defining a cooling chamber (sealed space) for containing optically connecting liquid 37. Numata further discloses a plurality of contrast ribs (bellows)34 extending from the frame's inner wall in the cooling chamber wherein the plurality of ribs 34 extend into a substantially parallel plane to the frame's formed first and second openings.

Regarding claim 2 Numata discloses in Figs. 4B, 5D the ribs in the inner wall are rounded in shape.

Regarding claim 3 Fig. 2 of Numata discloses the ribs in the inner wall of the holder 11 triangular in shape.

Regarding claim 5 Numata discloses (Figs. 5A-5G column 6 lines 35-67) the ribs (bellows) are integrally formed in the inner wall of the frame.

Regarding claim 6 Numata discloses (column 3 lines 11-13) the optical signal generating device comprises a cathode ray tube 16.

Referring to claim 7 it is clearly evident from Figs. 1 and 2 that the ribs and adjacent troughs (bellows) 34 cover a surface area greater than 75% of the frame's inner wall's surface area.

Regarding claim 8 it is clearly evident from Figs. 1 and 2 that the ribs and adjacent troughs (bellows) 34 are continuous around the circumference of the frame's inner wall's surface area.

Regarding claim 10 Figs. 1 and 2 disclose each of the rib's height extending from the frame's inner wall is substantially similar along each rib.

Regarding claims 11 and 12, here the Applicant is claiming the product of the apparatus (coupler) with contrast ribs including a method (i.e. a process) of making the ribs, by 'ribs formed during the frame's casting process' (claim 11) and 'ribs formed by machining the frame after the frame is cast' (claim 12) consequently, claims 11 and 12 are considered "product-by-process" claims. In spite of the fact that a product-by-process claim may recite only process limitations, it is the product and not the recited process that is covered by the claim. Further, patentability of a claim to a product does not rest merely on the difference in the method by which the product is made. Rather, is the product itself which must be new and not obvious. As such, no patentable weight has been given to the processes recited in claims 11 and 12 (see MPEP 2113).

Claim 13 essentially recites the same limitations of claim 1 for a projection system and hence is rejected for the same reason. Regarding the functional recitation of 'contrast ribs for reducing the reflections of skew rays on the projection lens originating from the projection optical signal generating device' the examiner notes that no patentable weight has been given. In order to be given patentable weight, a functional limitation must be expressed as a "means" for performing the specified function as set forth in 35 USC § 112, 6<sup>th</sup> paragraph, and must be supported by

Art Unit: 2879

recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D. 172; 388 O.G.279.

Claim 14 recites the same limitation of claim 2 and hence is rejected for the same reason.

Claims 16, 17 and 18 recite the same limitations as of claims 10, 7 and 8 respectively and hence are rejected for the same reasons (see rejections of claims 10, 7,8).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,250,968 to Numata et al.

Regarding claim 4, Numata discloses the claimed invention except for the limitation of ribs in the inner walls being rectangular in shape. It has been held that a change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Dailey*, 357 F. 2d 669, 149 USPQ 47 (CCPA 1966). It would have been obvious to one having ordinary skill in the art to have the ribs in rectangular shape,

Art Unit: 2879

since such a modification would have involve a mere change in the shape of a component.

Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,250,968 to Numata et al. and further in view of U.S. Patent 6,696,776 to Florek.

Regarding claims 9 and 15 Numata does not exemplify the ribs coated with light absorbent material.

Florek in analogous art of cathode ray tube coupler discloses (column 3 lines 40-49) the inside wall surface of the coupler is coated with a non-reflective dark dye or paint (black paint) so that it does not reflect substantial amounts of light from CRT into the projection lens. Florek discloses that this coating thus improves the contrast by reducing reflections from the wall surface.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have the ribs on the inner wall of the coupler of Numata coated with light absorbent material as disclosed by Florek for improves the contrast by reducing reflections from the wall surface.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,250,968 to Numata et al. and further in view of U.S. Patent 6,130,497 to Takezawa et al.

Regarding claim 19 Numata discloses all the limitations but does not exemplify on manufacturing the coupler by casting aluminum alloy to form the frame.

Takezawa in same field of endeavor discloses (column 5 lines 1-12 Figs. 10,11) the coupler is manufactured by pouring molten die-casting aluminum alloy (aluminum-zinc) in a metal mold and by cooling the aluminum alloy die-casting material in the cavity. The coupler 43 is then removed from the movable metal mold 71. Takezawa discloses this manufacturing method being simple both the assembly efficiency and the assembly precision of the liquid cooling type cathode-ray tube can be improved.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute aluminum frame formed by pressing as disclosed by Numata by casting aluminum alloy and forming the coupler as taught by Takezawa for simplifying the manufacturing method and thus improving both the assembly efficiency and the assembly precision of the liquid cooling type cathode-ray tube.

Claim 20 essentially recites the same limitation of claim 10 and hence is rejected for the same reason (see rejection of claim 10).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. patent 5,202,706 to Hasegawa discloses focusing apparatus in projection television. U.S. patent 5,834,143 to Matsuoka et al. discloses use of



Art Unit: 2879

aluminum, aluminum alloys for forming frame like structures providing high mechanical strengths relative to lightness in weight and high hardness ensuring durability.

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S.R.*

Sikha Roy  
Patent Examiner  
Art Unit 2879

*Karabi Guharay*  
Karabi Guharay  
Primary Examiner